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GB 0504317 A GB 0320546 A US 4421773 A

(58) Field of Search

UK CL (Edition M ) B5A AA2 AC AM5X ANA AT3P

AT6P AT8P

INT CL<sup>5</sup> A23G 1/20 1/21 1/22

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## (54) Manufacture of novelty confectionery item

(57) A method of manufacturing a novelty confectionery item which comprises the steps of: providing a capsule-forming mould of at least two segments (7, 9) and a relief figure-forming mould (11) dimensioned to fit within the capsule-forming mould to enable a relief figure to be formed within the capsule-forming mould; mounting said relief figure forming mould to a segment of said capsule-forming mould; filling the segments of the capsule-forming mould with a castable liquid confectionery material; and casting the material to thereby form a capsule moulding of said at least two segments, one segment of which has the relief figure formed projecting therefrom and the one or more other cooperating segment of the capsule moulding providing a cavity within which the relief figure may be accommodated.

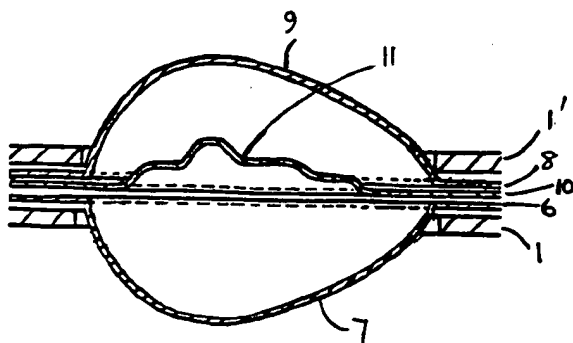


FIGURE 5

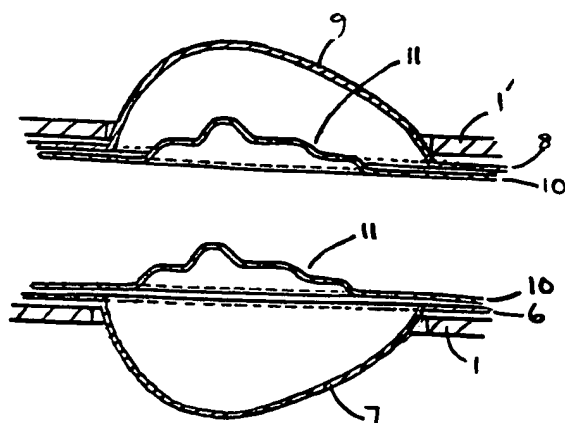


FIGURE 6

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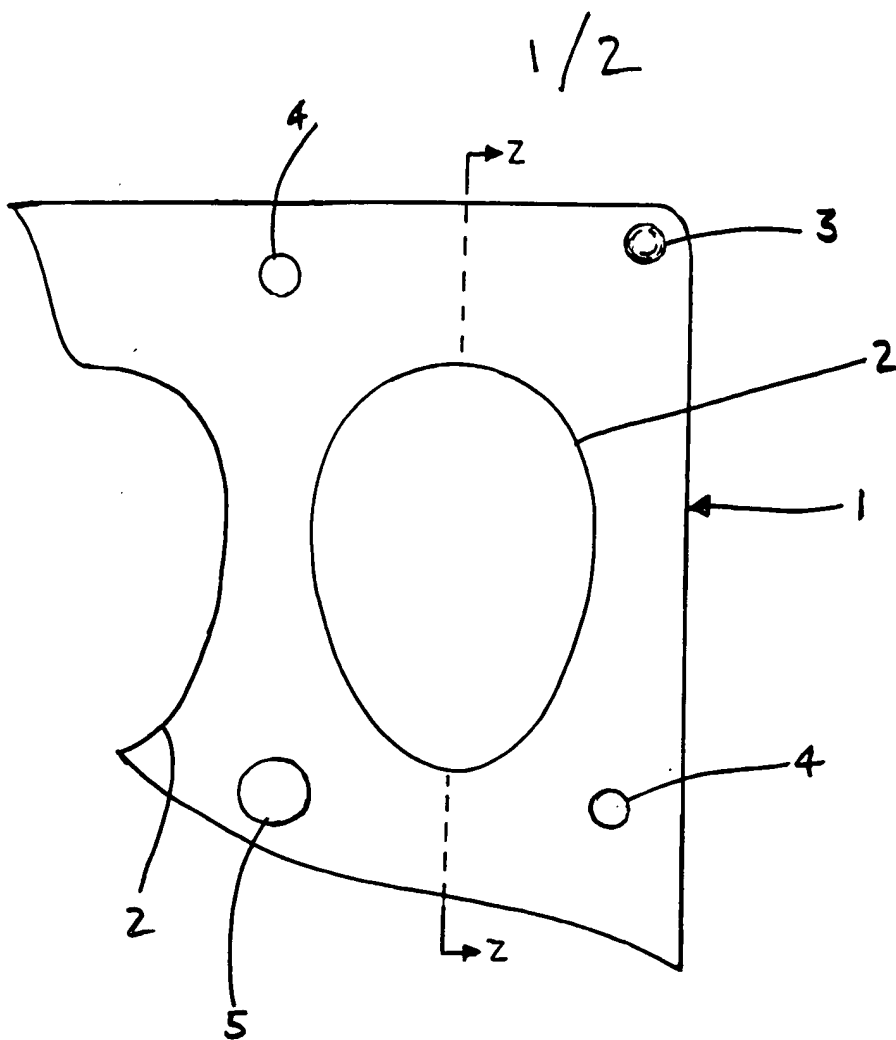


FIGURE 1

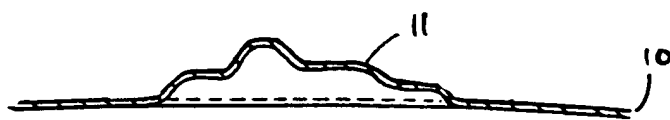


FIGURE 2

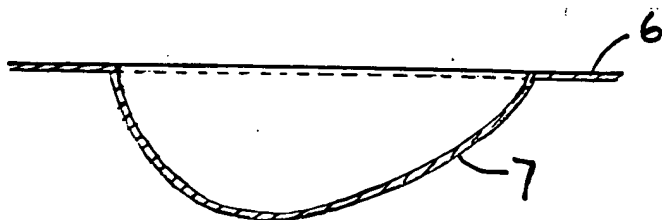


FIGURE 3



FIGURE 4

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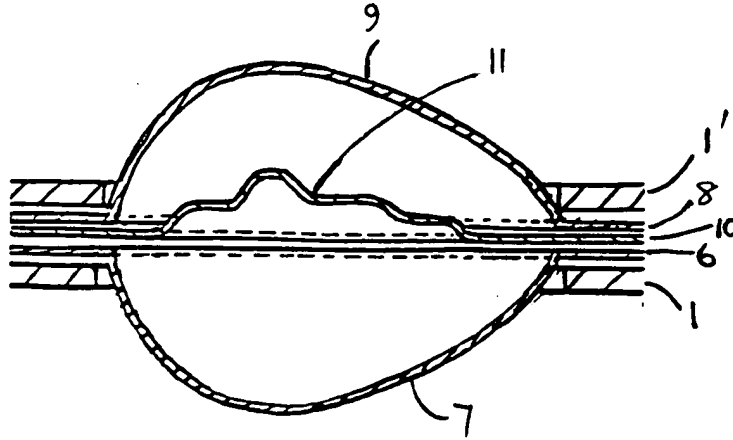


FIGURE 5

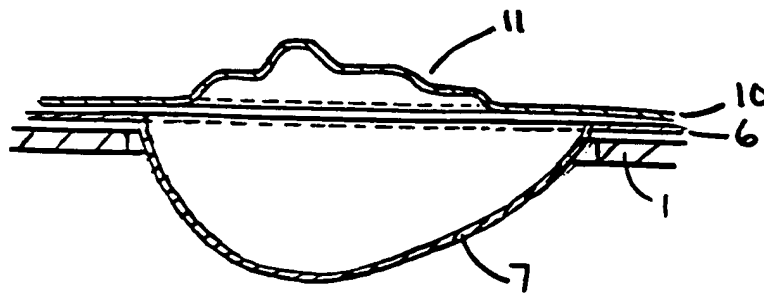
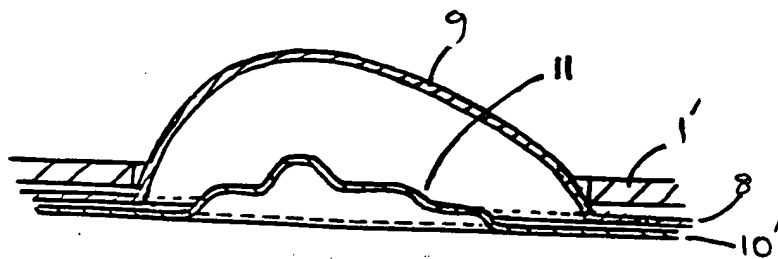


FIGURE 6

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### NOVELTY CONFECTIONERY ITEM

#### Field of the Invention

5 The present invention relates to novelty confectionery items and more particularly, but not exclusively, to chocolate eggs and the like and a process for their manufacture.

#### Background to the Invention

10 The novelty confectionery industry is a significant sector of the food industry of many countries and its existence is underpinned by the strong demand for unusual and interestingly formed confectionery items which were conventionally consumed on special occasions and holidays such as, Christmas and Easter, but which are now consumed more frequently.

15 The hollow chocolate Easter egg has been in existence now for many years and, along-side the hollow chocolate figurines that are used to decorate Christmas trees, represent the earliest and most familiar novelty confectionery items. In recent years the basic hollow chocolate egg has been developed in a variety of forms to increase its attractiveness to the buying public. The Ferrero Rocher and Kinder chocolate eggs with their coloured  
20 syrupy fillings represent well known examples and the latter, especially, have large market appeal and are sold year round. However, chocolate eggs of the latter type require an involved manufacturing process and are consequently comparatively expensive to manufacture.

It is a general objective of the present invention to provide a novelty confectionery item of highly distinctive appeal and a manufacturing process therefor which is comparatively simple and economical.

#### Summary of the Invention

5 According to a first aspect of the present invention there is provided a method of manufacturing a novelty confectionery item which comprises the steps of:

10 providing a capsule-forming mould of at least two segments and a relief figure-forming mould dimensioned to fit within the capsule-forming mould to enable a relief figure to be formed within the capsule-forming mould; mounting said relief figure forming mould to a segment of said capsule-forming mould; filling the segments of the capsule-forming mould with a castable liquid confectionery material; and casting the material to thereby  
15 form a capsule moulding of said at least two segments, one segment of which has the relief figure formed projecting therefrom and the one or more other co-operating segment of the capsule moulding providing a cavity within which the relief figure may be accommodated.

20 Preferably the segment of the capsule-forming mould which forms the cavity within which the relief figure is accommodated is fitted with a relief figure mould to form a negative impression extending into the segment to serve as said cavity.

25 Preferably the segment of the capsule-forming mould which forms the cavity within which the relief figure moulding is accommodated is fitted with a negative relief figure mould to form a negative impression extending into said segment to serve as the cavity.

The positive and negative relief figure mouldings are suitably adapted to have a clearance of approximately 0.5mm therebetween when the positive moulding is fitted into the negative moulding.



This is suitably achieved by the surface of the negative relief mould being roughened.

5 According to a second aspect of the present invention there is provided a mould assembly for manufacturing a novelty confectionery item which comprises: a capsule-forming mould of at least two segments and a relief figure-forming mould fitted to a segment of the capsule-forming mould to enable a relief figure moulding to be formed on a segment of the capsule-forming moulding which is dimensioned to fit within a cavity of the one or more other capsule moulding segments.

10 According to a third aspect of the present invention there is provided a novelty confectionery item which is formed by a process according to the first aspect of the present invention or using the mould assembly of the second aspect of the invention.

#### Brief Description of the Drawings

15 Preferred embodiments of the present invention will now be more particularly described, by way of example, with reference to the accompanying drawings, wherein:

Figure 1 is a plan view of a corner portion of a broadly conventional chocolate egg mould support frame;

20 Figure 2 is a transverse sectional view of a relief figure-forming mould;

Figure 3 is a transverse sectional view of an egg-forming mould;

Figure 4 is a transverse sectional view of the support frame taken along the line z-z in figure 1;

25 Figure 5 is a transverse sectional view of a first preferred embodiment of cast assembly; and

Figure 6 is an alternative preferred embodiment of cast assembly.

Description of the Preferred Embodiment

5 The conventional technique for manufacture of a batch of hollow chocolate eggs comprises pouring molten chocolate into egg moulds, or casts, formed of two segments and sealing the liquid chocolate within each respective mould with a planar cover sheet and then spinning the cast assembly under cooling conditions so that the liquid chocolate is spread around the internal walls of each mould and sets as it cools to independently form the hollow egg halves.

10 The case assembly for forming a batch of hollow chocolate eggs comprises a support frame 1, generally formed as a rectangular plate or tray having a plurality of ovoid apertures therein to serve as sockets within which each egg cast is mounted, in use.

15 Figure 1 illustrates a corner portion of such a support frame 1 having egg cast sockets 2 and fixing means 3,4,5 for securing the mould sheet to the support frame 1.

20 Figure 3 illustrates a transverse sectional view of a portion of an egg forming cast sheet 6 detailing one of a plurality of egg casts 7 provided on the egg forming cast sheet 6 to form one half of a confectionery egg. A complementary egg-forming cast sheet 9 similarly has a plurality of egg casts 10 which are mirror images of the egg casts 7 to thereby form a one half segment of the egg which complements the half segment of the egg formed by the other egg cast 7.

25 The securing means 3,4,5 provided on each support frame 1 comprise, as illustrated in figure 1, a frame assembly peg 3 to engage in a corresponding socket provided on a mating cast sheet or support frame 1, a plurality of magnets 4 spaced at intervals around the support frame 1; and a plurality of sockets 5 to receive projections from the cast sheets 6,9 which are mounted to the support frame 1.

Referring to figure 2, there is shown a figure forming cast sheet which would conventionally be mated with a complementary figure forming cast sheet to form a whole figure or used to form a medallion-like moulding having the figure impressed thereon in positive or negative relief.

5 In implementing the present invention, an egg forming cast sheet 6 is mounted to a support frame 1 with the egg cast 7 projecting through the cast socket 2 in support frame 1. A figure forming cast sheet 10 is then placed atop the egg forming cast sheet 6 with the recessed surface of the figure forming sheet 10 facing toward the egg forming sheet 6 and the figure forming  
10 cast 11 projecting away from and in registration with the egg forming cast 7 such that when liquid chocolate is supplied into the cavity formed between the egg cast 7 and relief figure cast 11 a one half segment of a chocolate egg may then be formed, having a relief moulding of the figure formed projecting from the otherwise flat inner face of the egg half.

15 The configuration of cast assembly components involved in forming the above positive relief cast is as illustrated in the lower part of figure 5 and 6.

The case assembly configuration for formation of the complementary half of the chocolate egg suitably comprises a mating egg forming cast sheet 8 which is held with its egg forming casts 9 in registration with the corresponding casts  
20 7 of the first egg forming cast sheet 6 by a further support frame 1', as illustrated in figure 5.

The securing elements 3,4,5 of the support frame will ensure effective registration of the opposing mould segments and maintain the mating relationship until the casting process is complete.

25 By supplying liquid chocolate to the cavity thus formed on each side of the figure forming cast sheet 10 the complimentary halves of the chocolate egg may be formed simultaneously, with one half of the egg having a negative relief impression into which a positive relief impression on the other half of the egg may matingly engage.

5 It will be appreciated that the chocolate egg may be formed either as a hollow egg of at least two segments on one of which there is a septum having the relief figure formed thereon, or as a solid egg of two or more segments on an inner face of which the relief figure is formed which matingly engages with a negative impression on a complimentary segment.

The form of the figure and the form of the surrounding capsular moulding may each be of a range of different forms. The outer capsular moulding need not necessarily be ovoid and might, for example, be wholly irregular to resemble a rock, or the like.

10 In an alternative procedure for the formation of the mating segments of the egg, as illustrated in figure 6 the two segments may be formed independently using a pair of figure forming cast sheets 10,10'.

15 Where complementary figure relief mouldings are formed on the complementary segments of the egg it is, important that sufficient clearance be allowed between the positive and negative relief mouldings to allow for contraction of the chocolate during cooling so that the complementary relief mouldings nest cleanly together. A 0.5 mm separation between the positive and negative mouldings is desirable and readily achieved.

20 The face of the figure forming mould 10 in contact with the chocolate is suitably roughened by sand blasting to minimise the contraction of the negative relief moulding.

It is, furthermore, advisable to maintain a perimeter of at least 3 mm between the inner wall of the egg moulding and the periphery of the figure moulding to maintain the integrity of the segment moulding formed.

25 By the present invention a chocolate egg may be formed of two halves simply, quickly and economically which, when the halves are separated, reveal the relief figure, to the delight of the consumer, in a manner which is strongly reminiscent of the opening of a rock in which a fossil is encapsulated.

## CLAIMS

1. A method of manufacturing a novelty confectionery item which comprises the steps of:

5 providing a capsule-forming mould of at least two segments and a relief figure-forming mould dimensioned to fit within the capsule-forming mould to enable a relief figure to be formed within the capsule-forming mould; mounting said relief figure forming mould to a segment of said capsule-forming mould; filling the segments of the capsule-forming mould with a  
10 castable liquid confectionery material; and casting the material to thereby form a capsule moulding of said at least two segments, one segment of which has the relief figure formed projecting therefrom and the one or more other co-operating segment of the capsule moulding providing a cavity within which the relief figure may be accommodated.

15 2. A method as claimed in Claim 1, wherein the segment of the capsule-forming mould which forms the cavity within which the relief figure moulding is accommodated is fitted with a negative relief figure mould to form a negative impression extending into said segment to serve as the cavity.

20 3. A method as claimed in Claim 2, wherein the positive and negative relief figure mouldings are adapted to have a clearance of approximately 0.5mm therebetween when the positive moulding is fitted into the negative moulding.

4. A method as claimed in Claim 3, wherein the surface of the negative relief mould is roughened.

25 5. A mould assembly for manufacturing a novelty confectionery item which comprises: a capsule-forming mould of at least two segments and a relief figure-forming mould fitted to a segment of the capsule-forming mould to enable a relief figure moulding to be formed on a segment of the capsule-

forming moulding which is dimensioned to fit within a cavity of the one or more other capsule moulding segments.

6. A novelty confectionery item formed by the process according to any of Claims 1, 2, 3, or 4.

5 7. A mould assembly substantially as hereinbefore described with reference to the accompanying drawings.

**Patents Act 1977****Examiner's report to the Comptroller under Section 17 - 9 -**  
(The Search report)Application number  
GB 9406383.1**Relevant Technical Fields**

(i) UK Cl (Ed.M) B5A (AA2, AC, AM5X, ANA, AT3P, AT6P, AT8P)

(ii) Int Cl (Ed.5) A23G (1/20, 1/21, 1/22)

Search Examiner  
J P LEIGHTONDate of completion of Search  
4 JULY 1994**Databases (see below)**

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

Documents considered relevant following a search in respect of Claims :-  
1-7

(ii) ONLINE DATABASES: WPI

**Categories of documents**

- X:** Document indicating lack of novelty or of inventive step.      **P:** Document published on or after the declared priority date but before the filing date of the present application.
- Y:** Document indicating lack of inventive step if combined with one or more other documents of the same category.      **E:** Patent document published on or after, but with priority date earlier than, the filing date of the present application.
- A:** Document indicating technological background and/or state of the art.      **&:** Member of the same patent family; corresponding document.

Category	Identity of document and relevant passages	Relevant to claim(s)
A	GB 0504317 (SHUTTLEWORTH & CO)	
A	GB 0320546 (BOGGILD & JACOBSEN)	
A	US 4421773 (AKUTAGAWA CHOCOLATE CO)	

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